

**Ameristar Perimeter Security USA Inc.**  
**Stalwart Post & Rail Anti-Ram Barrier System - M50/P1 Twin Cable System**  
**Construction Specification 32 30 00.11**

**PART 1 – GENERAL**

**1.01 WORK INCLUDED**

The contractor shall provide all labor, materials and appurtenances necessary for installation of the anti-ram barrier system defined herein at (specify project site).

**1.02 RELATED WORK**

Section \_\_\_\_ - Earthwork

Section \_\_\_\_ - Concrete

**1.03 SYSTEM DESCRIPTION**

The manufacturer shall supply a total anti-ram twin cable barrier system of the Ameristar Stalwart M50/P1 Post & Rail design, which has been tested and meets an M50/P1 designation under ASTM F2656. The system shall include all components (i.e., cables, braces, posts, and hardware) required.

**1.04 QUALITY ASSURANCE**

The contractor shall provide laborers and supervisors who are thoroughly familiar with the type of construction involved and materials and techniques specified.

**1.05 REFERENCES**

- ASTM A36/A36M – Standard Specification for Carbon Structural Steel
- ASTM F2656 – Standard Test Method for Vehicle Crash Testing of Perimeter Barriers
- Federal Specification RR-W-410D / Wire Rope and Strand.

**1.06 SUBMITTAL**

The manufacturer's literature and test documentation shall be submitted prior to installation.

**1.07 PRODUCT HANDLING AND STORAGE**

Upon receipt at the job site, all materials shall be checked to ensure that no damage occurred during shipping or handling. Materials shall be stored in such a manner to ensure proper ventilation and drainage, and to protect against damage, weather, vandalism and theft.

**PART 2 – MATERIALS**

**2.01 MANUFACTURER**

**A.** The anti-ram twin cable barrier system shall conform to the Stalwart M50/P1 Post & Rail design manufactured by Ameristar Perimeter Security USA Inc., in Tulsa, Oklahoma. This system shall be tested and certified to meet ASTM F2656, Impact Condition Designation M50, Penetration Rating P1, with capability of stopping a 15,000 lb vehicle traveling at speeds up to 50 mph.

**B.** The entire anti-ram twin cable barrier system, and all associated accessories, fittings, and fasteners shall be obtained from a single source.

**2.02 MATERIAL**

**A.** Steel material for cable-supporting framework (i.e., rails, braces and posts) shall conform to the requirements of ASTM A36/A36M.

**B.** The cross-sectional shape of the cable guide rail shall conform to the manufacturer's rail design, C8 x 11.5 channel with 5" x 3" x 1/2" angle rail to post attachment tabs. Terminal Posts shall conform to the manufacturer's bollard design with a nominal 8" x 16" x 1/2" wall. Intermediate Posts shall conform to the manufacturer's bollard design with a nominal 8" x 8" x 1/2" wall. Terminal brace shall conform to the manufacturer's design with a nominal 4" x 4" x 1/2" wall. Terminal post plate shall conform to the manufacturer's design with a nominal 6" x 1" x 30".

C. The cable material shall be Independent Wire-Rope Core (IWRC) wire rope conforming to Federal Specification RR-W-410D, 6 x 37 Warrington Seale, preformed, right regular lay, dry lubrication, Extra Improved Plow Steel (EIPS), with a breaking strength of 228,000 pounds (114 tons). Cable diameter shall be 1-1/2 inch.

### **2.03 FABRICATION**

A. Rails, braces and posts shall be pre-cut to specified lengths. Rails, brace plates and posts shall be pre-drilled to accept fasteners. Terminal Posts shall be pre-cut to accept brace plate attachment. Terminal post and terminal post plates shall be joined by welding for a complete post assembly. Terminal brace and brace plates shall be joined by welding for a complete terminal brace assembly. Rails and rail to post attachment tabs shall be joined by welding for a complete rail assembly.

B. The manufactured framework shall be subjected to the PermaCoat® thermal stratification coating process (high-temperature, in-line, multi-stage, multi-layer) including, as a minimum, a six-stage pretreatment/wash (with zinc phosphate), an electrostatic spray application of an epoxy base, and a separate electrostatic spray application of a polyester finish. The base coat shall be a thermosetting epoxy powder coating (gray in color) with a minimum thickness of 2 mils (0.0508mm). The topcoat shall be a “no-mar” TGIC polyester powder coat finish with a minimum thickness of 2 mils (0.0508mm). The color shall be (specify black, bronze, white or desert sand).

## **PART 3 - EXECUTION**

### **3.01 PREPARATION**

A. The purchaser shall indicate the location of barrier line with suitable stakes. Stake intervals shall not exceed 500 ft or line of sight.

B. The purchaser shall indicate all underground utility locations, USC&G benchmarks, property monuments, and other underground structures.

C. Before installing the anti-ram twin cable system, all necessary site clearing and grading shall be performed by the purchaser. An adequate clearance on both sides of the cable barrier line is required.

D. Soil strength shall be equivalent to soil strength recorded during the ASTM F2656 certification test or the footer size and depth must be adjusted accordingly based on professional engineering analysis.

### **3.02 INSTALLATION**

The anti-ram barrier shall be installed per Ameristar’s tested M50/P1 system instructions. Posts, rails, braces, cabling, and fasteners shall be installed according to manufacturer’s installation instructions and drawings. The “Earthwork” and “Concrete” sections of this specification shall govern material requirements for the concrete footer unless otherwise specified by the product drawings or installation instructions.

### **3.03 FENCE INSTALLATION MAINTENANCE**

If cutting/drilling of system components is required or if product coating has been comprised; adhere to the following steps to seal the exposed steel surfaces; 1) Remove all metal shavings from cut area. 2) Apply zinc-rich primer to thoroughly cover cut edge and/or drilled hole; let dry. 3) Apply 2 coats of custom finish paint matching fence color. Failure to seal exposed surfaces per steps 1-3 above will negate warranty. Spray cans or paint pens shall be used to prime and finish exposed surfaces; it is recommended that paint pens be used to prevent overspray.

### **3.04 CLEANING**

The contractor shall clean the jobsite thoroughly to ensure it is left neat and free of any debris caused by the installation of the anti-ram twin cable system.